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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,568	10/09/2003	Tim A. Matus	ITW7510.063	2567
33647	7590	12/08/2004	EXAMINER	
ZIOLKOWSKI PATENT SOLUTIONS GROUP, LLC (ITW)			HOANG, TU BA	
14135 NORTH CEDARBURG ROAD			ART UNIT	
MEQUON, WI 53097			PAPER NUMBER	
			3742	

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/605,568	MATUS ET AL.	
	Examiner	Art Unit	
	Tu Ba Hoang	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/14/03</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

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***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 14, and 18-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the welding-type plasma torch" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim or from the preceding claim.

In claims 14 and 18, the recitations of "indicator" and "indictor" are confused and perhaps typing errors. Such recitations should be changed to "indicator" instead.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 15-18, and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al (US 5,866,869) cited by the Applicants. Schneider et al shows all features of the claimed invention including a plasma cutting system or assembly (Figures 1-2) comprising a plasma cutting power source 102, a plasma torch 100 operationally connected to the plasma cutting power source 102, and a processing unit 104 disposed within the plasma torch as shown in Figure 1 (column 3, lines 11-17) and configured to control the plasma cutting power source (column 4, lines 3-15 and column 5, lines 30-32) of a plasma cutting process (also see column 4, line 66 to column 5, line 6), wherein the processing unit 104 is further configured to receive data (i.e., feedback signals or communications link 110 and 112) from a plurality of sensors 106 (column 4, lines 59-65, i.e., 106 circuitry including W, A, E disposed within the plasma torch, configured to interpret feedback from the sensors and regulate operation of the plasma cutting power source (i.e., magnitude of cutting arc current and pilot current) according to the feedback (i.e., output W and anode A as set forth at column 3, lines 26-33), the processing unit 104 is further configured to serialize communication with the plasma cutting power source 102 (i.e., through sense unit 106, and processing unit 104 as shown clearly in Figure 2) to receive control data (or feedback signals 110,112) from at least one user input (i.e., at switch 114), which is one of at least a start pilot arc command and an adjust amperage control (column 4, lines 3-15 and lines 39-52), and control the plasma cutting process according to the user input, wherein the plasma torch is configured to perform the plasma cutting process with a maximum open circuit output voltage of greater than 220 volt DC (i.e., at set forth at column 4, lines 12-24, the pilot current threshold is about 17A, the cutting arc current minimum threshold is about 10A, the control unit 108 increases the magnitude of the pilot current to 15A and at column 5, lines 7-8, resistor 116 is 3 ohms and resistor 118 is 15 ohms, the open circuit voltage,  $V=RI$ , is within the range of 30 Volts to at least 270 Volts which is at least

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greater than the claimed 220 volt DC), and the plasma cutting power source 102 also includes at least one controller 106 configured to adjust a power output based on at least control signals or sensing signals from the plasma torch processing unit 104, the plasma cutting power source may include logic and control circuitry for interrupting or starting operation of the torch 100 as well as for manually selecting various operating parameters (column 3, lines 18-25).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnelder et al previously cited above. Schnelder et al discloses all of the claimed features as set forth above except for the plurality of feedback sensors includes at least one user input sensor, a power source activation sensor, an electrode type indicator, a tip type indicator and etc... (as recited in claims 4 and 19). However, Schnelder et al has disclosed that the sensing circuitry 106 can comprise other types of sensing circuitry including plural sensors that are well known in the art beside current and voltage sensors (column 4, lines 59-65). It would have been within the purview of obviousness to one having ordinary skill in the art at the time the invention was made to utilize in the plasma torch of Schnelder et al a plurality of sensors including those types recited in claims 14 and 19 in order to provide feedback signals or sensing signals to the processing unit or controller for a purpose if so desired.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Norris et al (US 6,794,601), Ulrich et al (US 6,781,085), Borowy et al (US 6,365,868), Picard et al (US 6,359,251), and Daniel (US 5,831,237).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (571) 272-4780. The examiner can normally be reached on Mon-fri from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu Ba Hoang  
Primary Examiner  
Art Unit 3742

December 02, 2004